

### **REMARKS**

By this Amendment, Applicant has amended claims 6 and 27 to replace "an annular ring" with "a collar." Applicant amended claims 1, 8, 22 and 34 to say that there are no studs on the line which separates the defined sets of studs. Applicant also amended claims 14 and 18 to identify the defined rows of studs as being adjacent rows.

The Examiner rejected claims 6 and 27 under Section 112 saying that the phrase "annular ring" was unclear. Applicant has amended claims 6 and 27 to replace "an annular ring" with "a collar." The collar is clearly shown in Figure 3 and identified by reference number 5. This Amendment overcomes the objection to claims 6 and 27.

The present invention concerns a studded wall for a boiler or furnace. The thickness of these walls must be periodically tested using an ultrasonic probe to determine what if any corrosion or erosion of the tube wall has occurred and the rate at which this is occurring so that the wall can be replaced before it breaks. For these tests to be meaningful they must be repeatedly performed at the same location or locations on the furnace wall. United States Patent No. 5,107,798 issued to applicant shows a conventional studded boiler wall in Figure 2. As in other studded furnace and boiler walls of the prior art all of the studs are equally spaced such that one could not discern any distinct sets of studs based upon stud spacing. Consequently, stud spacing was not helpful in determining a particular location on a studded wall where a previous test had been conducted so that a subsequent test could be conducted at the same location.

Applicant discloses and claims a studded wall for use in a boiler or furnace in which there are distinct sets of studs. Claims 1, 8, 22 and 24, as well as the claims which depend from these independent claims, require that the sets of studs be separated by a line. The lines between sets

of studs creates a grid which can be used to determine where testing of the wall was previously done so that subsequent tests can be taken in the same location. In the embodiment illustrated by Figure 2 of the pending application, the lines are created by providing a wider spacing between adjacent rows of studs in different sets than the spacing of rows of studs within each set. Thus, there are no studs on these lines.

The Examiner has rejected all claims based upon Applicant's United States Patent No. 5,107,798 which discloses and claims a boiler tube stud. These studs are shown on a boiler wall in Figure 2. The studs are shown to be generally equally spaced. One cannot distinguish any one set of studs from another set of studs based upon stud spacing. At column 7, line 63 the '798 patent speaks of "Identical rows of flat studs". There is no teaching or suggestion that the studs should be anything other than equally spaced.

The Examiner in rejecting the claims noted that in Figure 2 of the '798 patent there is a first set of studs containing the top two rows of studs and a second set of studs containing the bottom two rows of studs. These two sets of studs defined by the Examiner are separated by a distance greater than the distance between adjacent rows of studs, "as evidenced by the more than 3 rows of studs that separate the first and second regions" observed the Examiner. The pending claims 1 through 13 and 22 through 38 require that the sets of studs be separated by a line. By this amendment Applicant has amended those claims to require that there are no studs on this line. In rejecting the claims based upon the '789 patent the Examiner identified the line between the two rows as a region consisting of more than three rows of studs. Consequently, the region identified by the Examiner as corresponding to the line in applicant's claims 1 through 13 and 22 through 38 does not meet the definition of the line (which has no studs on it) defined by the


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amended claims. Since there is no such line disclosed or suggested in the '798 patent, claims 1 through 13 and 22 through 38 as amended are patentable over this reference.

Claims 14 and 18 distinguish the sets of claims by the spacing between adjacent rows of studs. These claims as amended clearly say that the spacing between adjacent rows of studs within a set is different from the spacing between adjacent rows of studs from different sets. Since the spacing between all rows of studs in the '798 patent is the same and the rows are identical claims 14 and 18 as amended are patentable over this reference. Claims 15 through 17 depend from claim 14 and are patentable because claim 14 is patentable. Claims 19 through 21 depend from claim 18 and are patentable because claim 18 is patentable.

For the foregoing reasons the claims as amended are patentable. Reconsideration and allowance of all pending claims are respectfully requested.

Respectfully submitted,

  
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